

6037

SARA

REPORT ON THE
JUPITER PROPERTY
(SARA CLAIMS)

for
SUSIE GOLD MINES LTD.

by
Robert Potter P. Eng.

Fulford Harbour B. C. September 20, 1976

94C/5W

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
No. 6037

CONTENTS

PART "A"

Summary and Conclusions	Page 1
Recommendations	1
Cost Estimate	2

PART "B"

1-00	Introduction	3
2-00	Property	3
3-00	Location, Access and Physiography	4
4-00	History	4
5-00	Geology	5
5-10	Regional Geology	5
5-20	Property Geology	5
6-00	Geochemistry	8
	Appendix I - Certification	10

LIST OF EXPENDITURES

ILLUSTRATIONS

1	Location Map
2	Property Map
# 1 3	Geology - Jupiter Property
4	Copper Geochemistry
5	Molybdenum Geochemistry
6	Zinc Geochemistry
7	Silver Geochemistry
2 8	Geochemical Map - Copper
3 9	Geochemical Map - Molybdenum
4 10	Geochemical Map - Zinc
5 11	Geochemical Map - Silver
6 12	Geochemical Map - Gold

PART "A"

SUMMARY AND CONCLUSIONS

Following the recommendations of R. W. Phendler, P.Eng., Susie Gold Mines Ltd. carried out a program of geological mapping and soil sampling on the Jupiter property in 1976.

The work carried out has not added appreciably to the existing knowledge of the Jupiter silver prospect. It has, however, disclosed some previously unreported showings of porphyry type copper/molybdenum mineralization. Fracture controlled occurrences of chalcopyrite and molybdenite are found scattered throughout outcrops of quartz monzonite over an area of about 150 by 50 meters. Surface grades are subeconomic at best but the host rocks are strongly fractured and probably leached near surface.

Soil geochemistry does not reflect the mineralized showings but coincident anomalies in molybdenum and zinc correlate with a major fault which appears to be related to local intrusive events.

The numerous and varied occurrences of mineralization within the Jupiter property are strongly suggestive of a major zoned mineralizing system. Further work is definitely required. This should initially be directed toward the evaluation of the porphyry showings.

RECOMMENDATIONS

It is recommended that:

1. A program of wide spaced induced polarization coverage be carried out to delineate the extent of the sulphide system. Infilling detail can be added in areas of specific interest.
2. Magnetometer survey.
3. Surface trenching.

If the results from the above work are sufficiently encouraging

a diamond drilling program of about 3000 feet should be carried out.

COST ESTIMATE

1. Line cutting - 25 km @ \$150.00/km	\$ 3,750.00
2. Induced polarization survey - 25 km @ \$350.00/km	8,750.00
3. Magnetometer survey - 25 km @ \$80.00/km	2,000.00
4. Trenching	5,000.00
5. Camp costs	3,000.00
6. Mobilization and demobilization	<u>2,000.00</u>
	24,500.00
Contingencies - allow 10%	<u>2,450.00</u>
TOTAL	\$ <u>26,950.00</u>

Drilling (depending on the results of the above program) 3000-feet
BQ @ \$20.00/feet overall - \$60,000.00.

Respectfully submitted


Robert Potter, P. Eng.

PART "B"

1-00 INTRODUCTION

Acting on the recommendations of R. W. Phendler, P.Eng., in his report dated December 14, 1975 Susie Gold Mines Ltd. carried out a program of geological mapping and soil sampling on the Sara claims, also known as the Jupiter property. These surveys are controlled by a grid of north-south lines spaced at 100 meters with sample stations at 50 meter intervals.

Soil samples were collected by Stellac Explorations of Germansen Landing and analyses of the soils were run by Min-En Laboratories Ltd. of North Vancouver, B. C.

The writer carried out the geological mapping and supervised the geochemical program.

The report of R. W. Phendler describes only the lead, zinc, silver vein deposits of the old Jupiter property. The area covered by the 1976 exploration program also included a number of mineralized zones which are exposed along Polaris Creek including known showings of gold in carbonate veins and bodies of massive pyrrhotite. A previously unreported occurrence of porphyry type copper/molybdenum mineralization was also found along the Polaris Creek canyon.

2-00 PROPERTY

The Jupiter property consists of three mineral claims, the Sue (12 units) the Sara West (20 units) and the Sara East (16 units); totaling 48 units. The ground was staked by D. Stelling of Germansen Landing. The configuration of the claims and the location of the legal corner posts are shown in figure 2.

While on the property the writer checked the boundary lines and found the claims to be staked in accordance with the modified grid system.

as required by the British Columbia mining act.

3-00 LOCATION, ACCESS AND PHYSIOGRAPHY

The Jupiter property is located two miles north of Aiken Lake in the Omineca Mining Division (NTS 94C5W). Approximate geographical co-ordinates are: 56°28'N, 125°45'W.

The claim block straddles the gorge of Lay Creek in the vicinity of its junction with Polaris Creek. The Omineca road cuts through the southwest corner of the property on the south side of Lay Creek. Access to the area north of Lay Creek is best afforded by helicopter to any of three cleared landing sites.

Topography of the property is that of the relatively flat Lay Creek valley which has been deeply incised by canyons on Lay and Polaris Creeks. The canyons show maximum relief of about two hundred feet. Most of the bedrock exposure on the property is found along the canyon walls. The average ASL elevation of the area is about thirty-five hundred feet.

The area adjacent to the canyons is covered by dense stands of white spruce, lodgepole pine and balsam fir.

4-00 HISTORY

Significant work on the Jupiter property was carried out by the Consolidated Mining and Smelting Company in the 1930's. Sampling drifts were driven on silver bearing veins at Jupiter showings and on a gold bearing carbonate vein which outcrops on Polaris Creek. The portals of these workings are caved at present.

5-00 GEOLOGY

5-10 Regional Geology

The geology of the Aiken Lake area is described in GSC Memoir 274 by E. F. Roots. The area lies astride the boundary between the Intermontane and Omineca tectonic belts. The dividing zone between the two belts in the area is drawn along a linear feature through Lay Creek and Osilinka River.

Locally the Omineca belt includes a wide variety of Palaeozoic sediments with their metamorphic equivalents. The Intermontane lithologies include volcanic rocks of the Upper Triassic Takla Group and a variety of acidic to intermediate intrusive rocks of the Jurassic to Cretaceous Omineca intrusive complex.

Numerous occurrences of lead, zinc and silver mineralization are known throughout the Palaeozoic terrain. Economic mineralization within the Mesozoic province is largely that of copper/molybdenum porphyry type deposits and strata controlled volcanogenic copper deposits. Occurrences of placer gold are known throughout the map area.

The Jupiter property is situated on the boundary zone between the Intermontane and Omineca tectonic belts. In the vicinity of the claims this boundary is shown on the GSC map as a major fault lying along Lay Creek.

5-20 Property Geology

Mapping of the Jupiter property was done on a scale of 1:5000. Almost all of the outcrop on the claim block is found along the canyons of Lay and Polaris Creeks.

The overburden which covers about 95% of the property includes gravels and fill. Its depth varies unpredictably from a few inches to

over one hundred feet. The major fault shown on the GSC map lying along Lay Creek was not observed in the field. Lithologic units appear to cross Lay Creek without offset. A strong trend of shear and foliation features was noted however which has a north-west, south-east direction. Some segments of Lay Creek conform to this direction but within the claim area much of Lay Creek has a west to east flow.

The Lay Creek fault is interpreted as a series of en échelon faults within a broad zone of pervasive shear foliation. A significant fault within this series is exposed in the canyon of Polaris Creek about eight hundred meters north of that creek's junction with Lay Creek. The strike extensions of this feature line up with a deep linear gully to the north-west and with the lower reach of Lay Creek to the south-east. Rocks exposed on opposite sides of this break differ markedly.

South-west of the 'Polaris fault' the rocks include firstly a unit of black pyritic argillite approximately one thousand meters thick. Continuing to the south-west one encounters a thick sequence of andesites which include flows and tuffaceous rocks which for the most part are strongly propylitized and sheared. These are part of the Takla Group of Upper Triassic volcanic rocks.

The old Jupiter showings lie within the altered volcanic rocks in the central part of the claim block. In the vicinity of the old adits carbonitization of andesites is much in evidence. This takes the form of intense carbonate metasomatism of envelopes up to thirty feet thick around carbonate veins. These altered rocks weather to a light rusty brown in contrast to the greys and greens of the propylitized andesites.

No new evidence was gained pertaining to the geology and mineralization of the Polaris silver prospect.

To the north-east of the 'Polaris fault' the geological picture is one of intense deformation and intrusive activity. Irregular bodies of quartz monzonite are found along a six hundred meter stretch of the Polaris canyon. These intrude a highly deformed sequence of impure limestone, black slate and fragmental basic volcanic rocks. Fracturing of the intrusive rocks varies from moderate to intense. Alteration, including sericitization and argillization, is weak to moderate with much local variation.

Chalcopyrite and minor molybdenite mineralization is found on fractures within the most northerly group of quartz monzonite outcrops. A grab sample here returned 0.234% Cu, .004% Mo, 0.17 oz. Ag and .003 oz. Au. Chalcopyrite is also found in fractures within intensely pyritized volcanic rocks lying adjacent to the mineralized intrusive.

The southerly group of quartz monzonite is somewhat porphyritic in texture. No chalcopyrite was noted here but the pyrite content (largely fracture controlled) varies from trace to 5%.

Numerous occurrences of pyrite with traces of chalcopyrite are found within zones of shearing and fracturing within the sediments and volcanics.

The old Polaris prospect is located on the left bank of Polaris Creek near the southern end of the area of quartz monzonite exposure.

Large showings of massive pyrrhotite were found only adjacent to the Polaris fault within the canyon. Small pods of pyrrhotite were also noted in the pyritized rocks bordering the mineralized intrusive. The pyrrhotite bodies are thought to be genetically related to structural and intrusive events (epigenetic) than volcanic events (syngenetic).

6-00 GEOCHEMISTRY

6-10 Collection and Analysis

A total of 876 soil samples were taken at 50 meter intervals on lines spaced at 100 meters. These samples were taken from the "B" soil horizon from pits dug with a grub hoe. The soils were placed in standard kraft bags and dried prior to shipment to Min-En Laboratories Ltd. in North Vancouver, B. C.

Samples were oven-dried, screened to -80 mesh and analyzed for copper, molybdenum, zinc, silver and in part for gold as follows:

6-20 Geochemical Results

The frequency distributions and log-probability plots for the various elements considered are shown on figures 4 through 7. The indicated threshold and anomalous values are as follows:

Element	Threshold	Anomalous
Copper	120 ppm	160 ppm
Molybdenum	6 ppm	9 ppm
Zinc	200 ppm	250 ppm
Silver	1.6 ppm	2.5 ppm

Figures 8 through 12 are soil geochemical maps for the various elements. As was to be expected the variable depth and quality of overburden appears to be washing much of the bedrock geology.

Copper shows a number of spot highs scattered over the maps. A concentration of high values occurs around the Jupiter prospect but the showings of chalcopyrite on Polaris Creek are not reflected by copper geochemistry.

Molybdenum is strongly anomalous along the northern extension of the Polaris fault trace. This anomaly, having dimensions of about 150

by 600 meters is open to the north-west. Again no geochemical reflection is seen over the area of known molybdenum mineralization on Polaris Creek.

Zinc is anomalous over an area which is closely coincident with that of molybdenum along the fault zone. Another area of high zinc is that surrounding the Jupiter prospect.

Silver in soils is anomalously high only in the vicinity of the Jupiter prospect.

Analyses for gold were only carried out on samples taken from the eastern end of the grid. No significant anomalies were detected here.

APPENDIX I
Certification

I, Robert Potter of Fulford Harbour, British Columbia do hereby certify that:

1. I am a graduate of the University of British Columbia, BAsC (1961) and McGill University, MSc Applied (1972).
2. Since graduation I have been engaged in mining exploration in Canada and Europe.
3. I am a registered member, in good standing, of the Association of Professional Engineers of British Columbia 7650.
4. I have not received nor do I expect to receive any interest, directly or indirectly, in the properties or securities of Susie Gold Mines Ltd.
5. That the information contained in this report is based on personal knowledge of the geology of the Aiken Lake area, and on a study of the available assessment reports and government reports.


Robert Potter, Msc., P.Eng.

Fulford Harbour, B. C.

September 20, 1976

Expend. List

MERIN MANAGEMENT LTD.
906 - 675 West Hastings Street
Vancouver, B. C.
V6B 1N2

Telephone (604) 681 2396

INVOICE TO: Susie Gold Mines Ltd.
202-900 West Pender Street
Vancouver, B. C.

June 30, 1976

Invoice #76-006

JUPITER PROPERTY - SARA EAST, SARA WEST AND SUE CLAIMS

Personnel:

C. H. Stanley - preparation of field program and cost \$ schedules; arrange sub-contracts; purchasing and expediting; correspondence	107.20	
R. Potter - engineer, field supervision June 10-22	1,176.00	
P. Robin - field assistant, June 10-30	931.00	
T. Eithier - field assistant, June 23-30	168.00	
	<u>1,657.63</u>	\$2,382.20

Disbursements:

A.B.C. Recreational Equipment, field equipment	39.34	
B.C. Industries, drafting supplies, field equipment	161.96	
Gilllands Lodge, groceries and supplies	318.78	
Northern Mountain Helicopter, charters	469.00	
VanCal, drafting supplies	66.79	
Expense reports - R. Potter, travel	357.37	
- C. Stanley, field supplies	37.14	
- D. Stelling, travel	207.25	
	<u>1,657.63</u>	
15% contingency on disbursements	248.64	1,906.27

Equipment rentals:

1 - 1976 Ford truck, 4x4 1/2 mo. @ \$600.00/mo	300.00	
Mileage - 1,500 miles at 10¢ per mile	150.00	
1 - Magnetometer 1/2 mo. @ \$ 70.00/mo.	35.00	
2 - Suunto Clinometers 1/2 mo. @ \$ 10.00/mo. ea.	10.00	
	<u>495.00</u>	

\$4,783.47

Aug. 24, 1976
afk E & CE

STELLAC EXPLORATION LTD.

GERMANSEN LANDING
BRITISH COLUMBIA
V.O.J. ITO

July 26, 1976

INVOICE

statement with
~~STATEMENT WITH PERTINENT MANAGEMENT FOR SUSIE GOLD MINES~~
JUPITER PROJECT

Collection of 875 samples @ \$3.75	\$3,280.25
Cut out Helicopter pad, collection of two chip samples on clear zone and collection of selected samples of copper molybdenum porphyry 1 day @ \$85.00	85.00
	<u>\$3,365.25</u> ✓

STELLAC EXPLORATION LTD.

GERMANSEN LANDING
BRITISH COLUMBIA
VOJ 170

July 26, 1976

EXPENSE ACCOUNT WITH SUSIE GOLD MINES LTD.

July 9-11 - Trip to Prince George

Simon Fraser Inn	\$150.60 ✓
Gold Cap Restaurant	4.30 ✓
Gas	4.66 ✓
Gas	8.35 ✓
	<u>\$167.91</u>

\$167.91

June 18 - Trip to Germansen (Jupiter)

Gas	\$ 3.20 ✓
Gas	7.06 ✓
C and C Restaurant	9.00 ✓
	<u>\$ 19.26</u>

\$ 19.26

C.P. Air Ticket for R. Lang, July 23, 1976 \$ 30.25 ✓

\$ 30.25 ✓

½ Car rental (Imperial Datsun) \$ 95.99 ✓

\$ 95.99 ✓

missing

TOTAL

\$313.41

APPLIES TO
SARA WEST
and
SARA EAST

MERIN MANAGEMENT LTD.
906 - 675 West Hastings Street
Vancouver, B. C.
V6B 1N2

Telephone (604) 681 2396

INVOICE TO: Susie Gold Mines Ltd.
202-900 West Pender Street
Vancouver, B. c.

July 31, 1976

Invoice #76-011

JUPITER PROPERTY-SARA EAST AND WEST, SUE CLAIMS:

Personnel:

C. H. Stanley, co-ordinate field program and data, drafting maps, expediting	\$ 525.00	
R. Potter, engineer, field supervision	948.40	
P. Robin, field assistant July 1-7	300.37	
P. Douglas, field assistant July 1-11	525.00	
T. Eithier, field assistant July 1-11	367.50	
		<u>\$2,666.27</u>

Disbursements:

B. C. Industries, field supplies and equipment	\$ 111.64	
B. C. Telephone, long distance calls	20.75	
Metro Motors, truck repairs	45.43	
Min-En Laboratories, geochemical analysis	30.00	
Northern Mountain Helicopters - charters	441.00	
VanCal, drafting supplies credit	(5.12)	
Expense reports - C. H. Stanley, field supplies	31.72	
P. Robins, travel	47.50	
	<u>722.92</u>	

15% contingency on disbursements

108.44

831.36
\$3,497.63 ✓
^

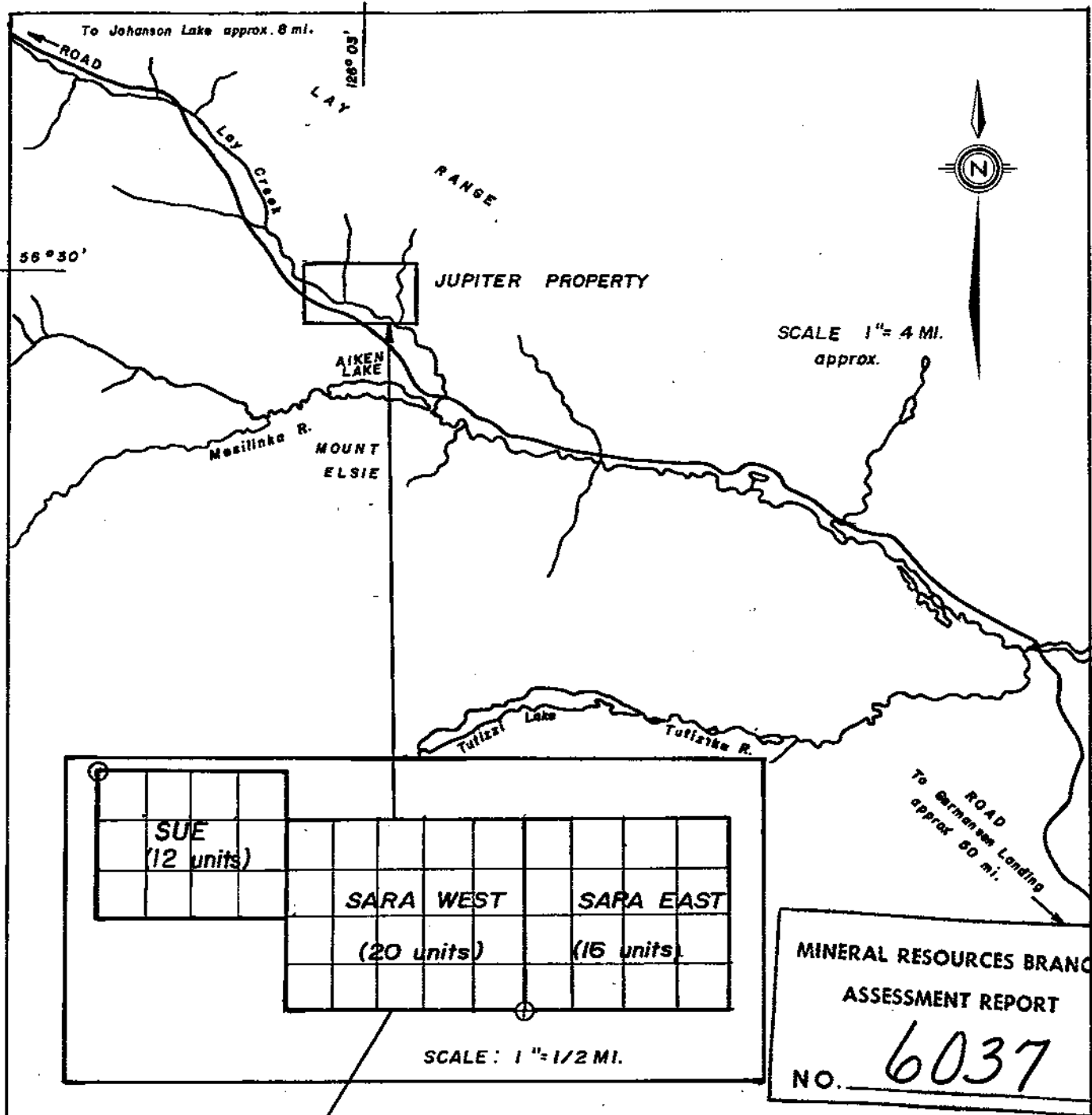
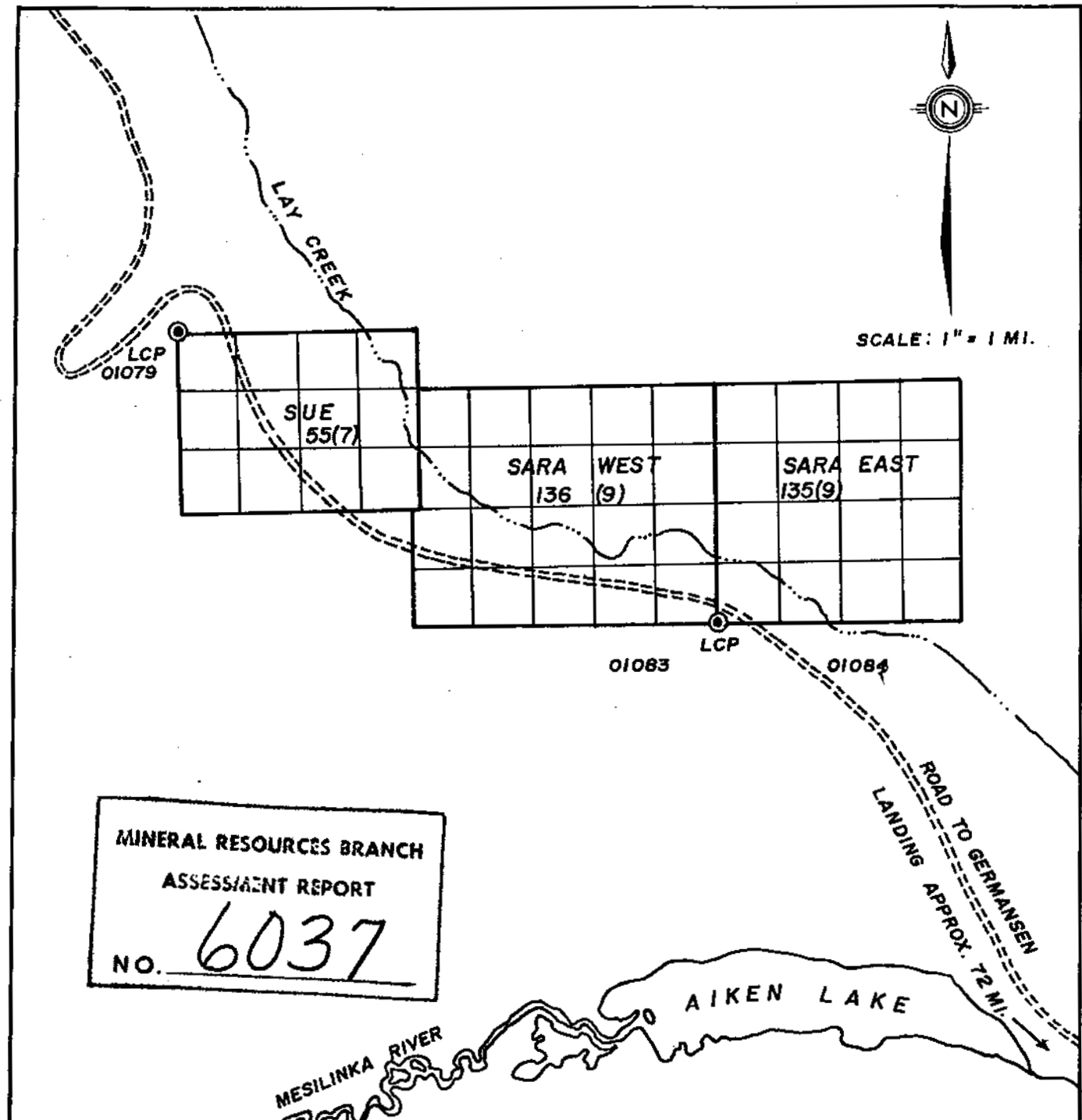


FIGURE 1



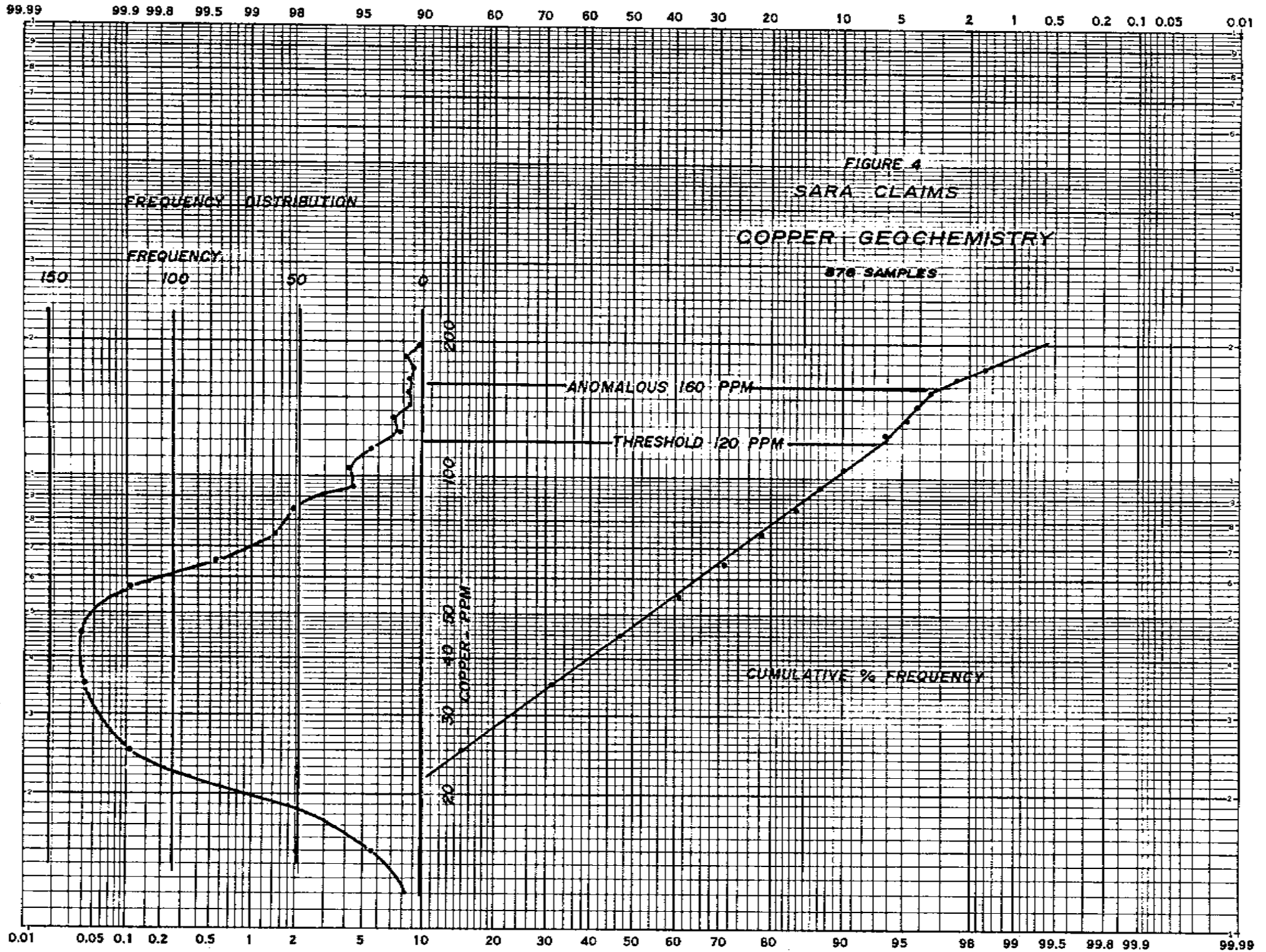
British Columbia	
SUSIE GOLD MINES LTD.	
JUPITER PROPERTY, SUE & SARA CLAIMS	
MINING DIVISION: OMINECA	
PROPERTY LOCATION MAP	
MAP REFERENCE: 94 C/5W	
COORDINATES: 56° 30' N, 126° 03' W	
MERIN MANAGEMENT LTD.	OCTOBER, 1976.

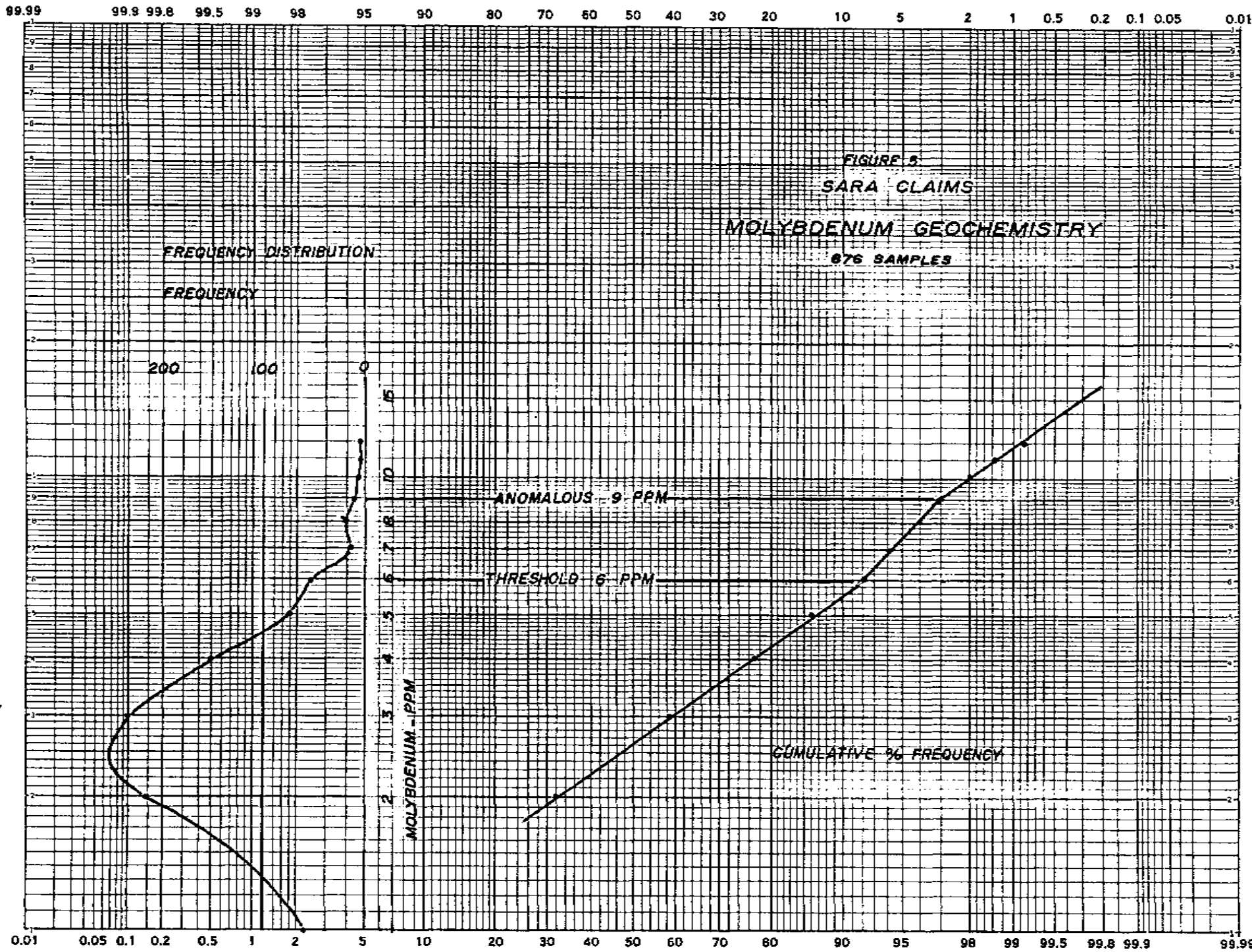


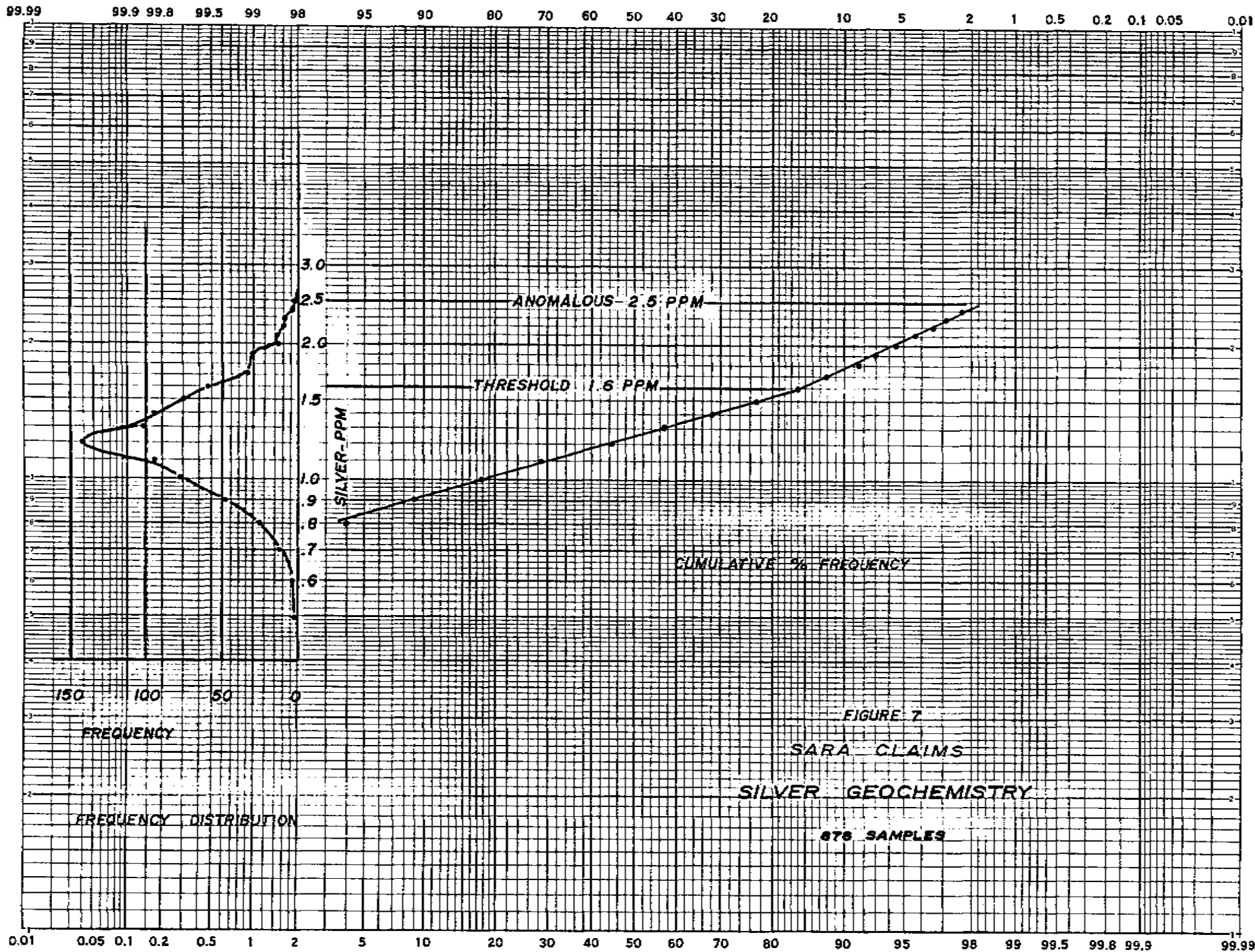
MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
 No. 6037

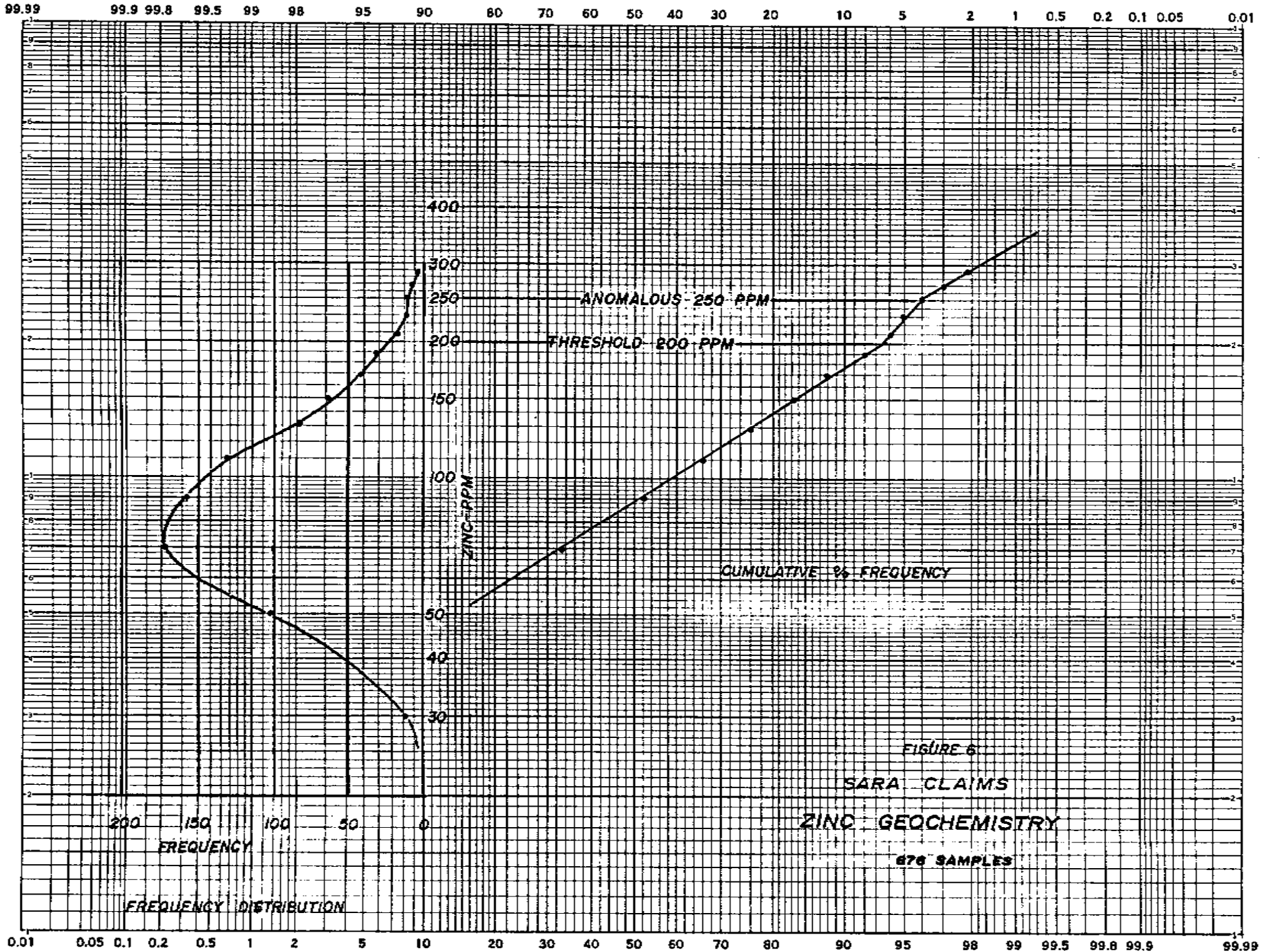
FIGURE 2.

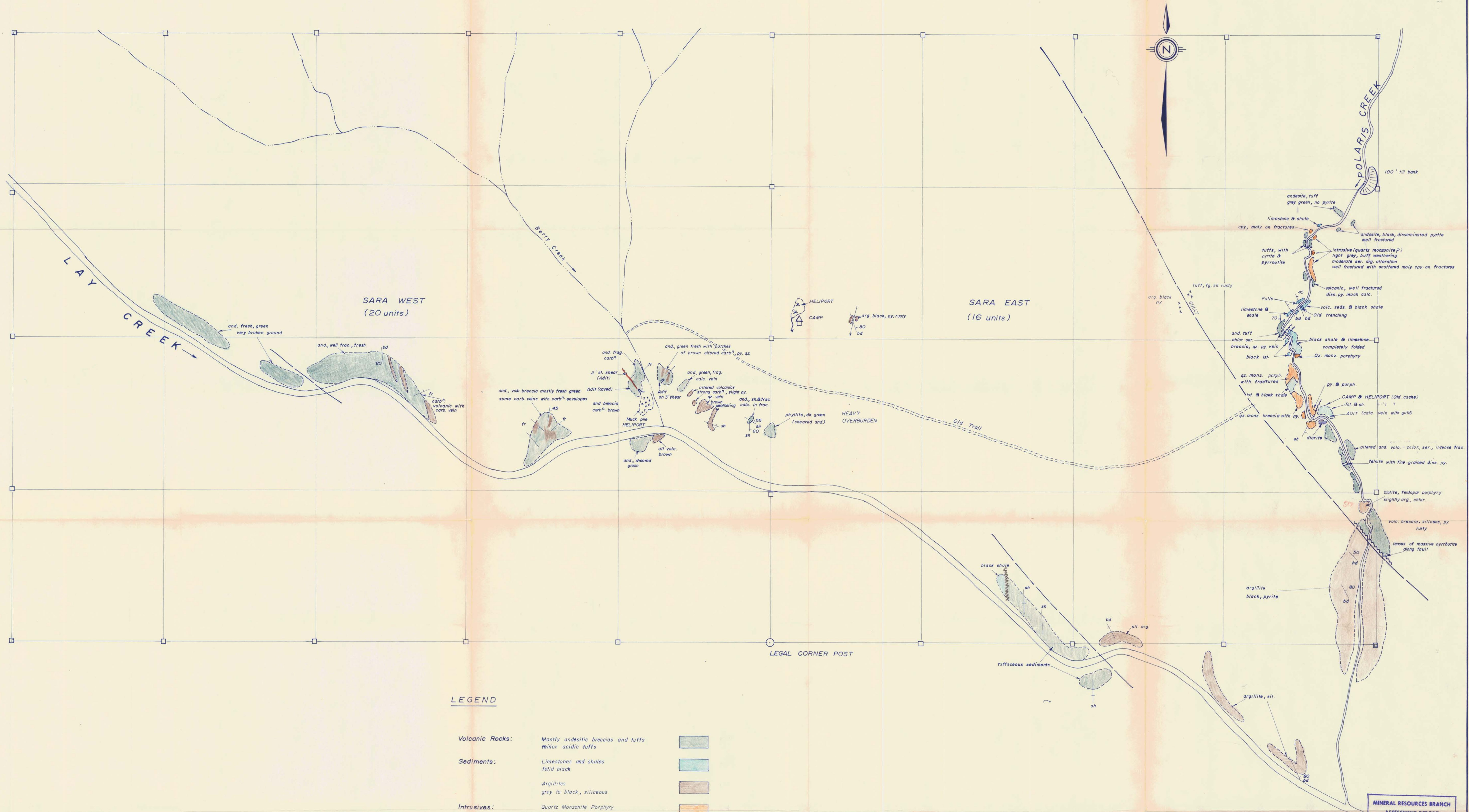
SUSIE GOLD MINES LTD.
JUPITER PROPERTY, SUE & SARA CLAIMS
 Omineca Mining Division, B.C.
PROPERTY MAP
 MAP REFERENCE: 94 C/BW
 COORDINATES: 56° 30' N, 126° 03' W
 MERIN MANAGEMENT LTD. OCTOBER, 1976











LEGEND

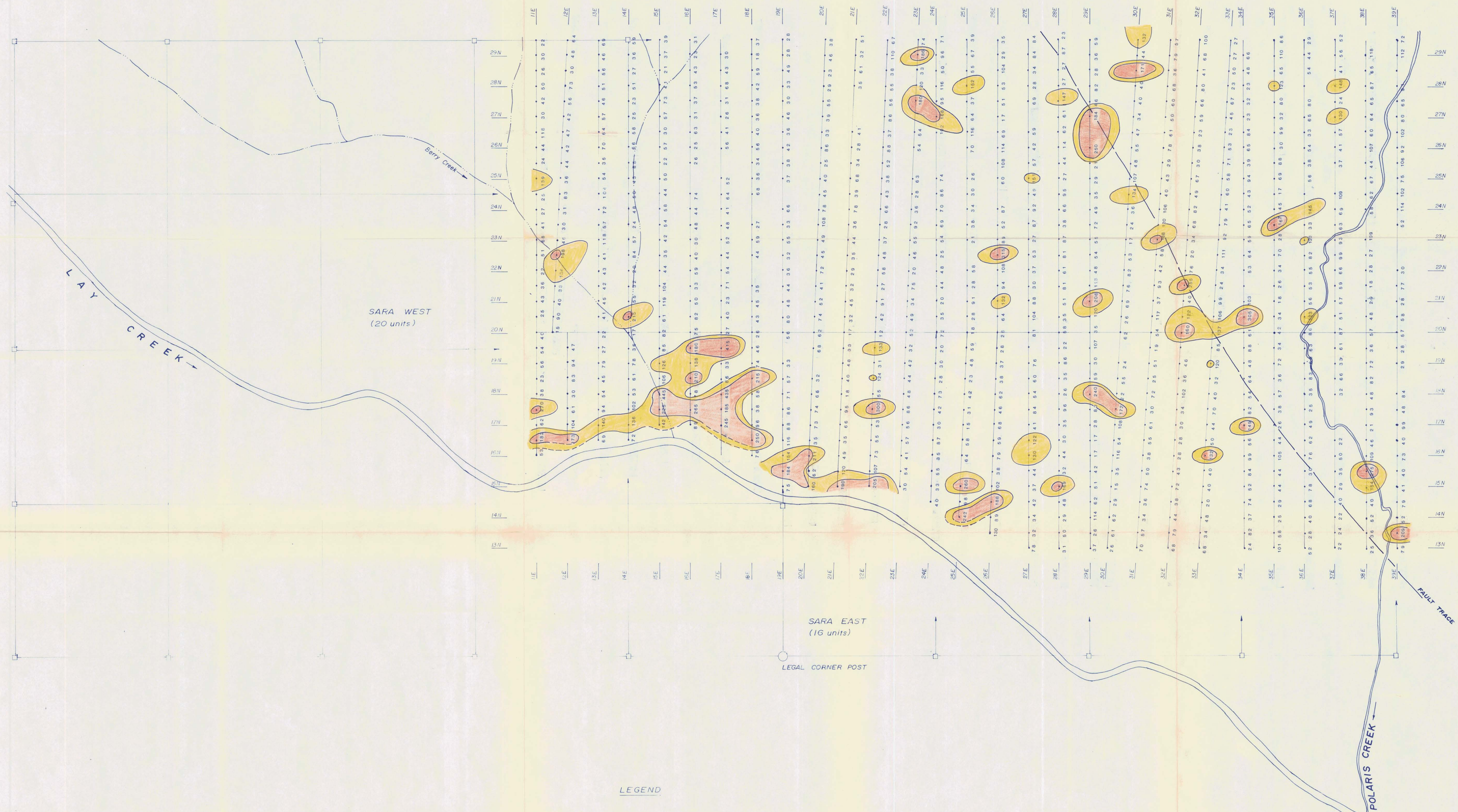
- | | | |
|--|---|--|
| Volcanic Rocks: | Mostly andesitic braccias and tuffs
minor acidic tuffs | |
| Sediments: | Limestones and shales
feldid black | |
| | Argillites
grey to black, siliceous | |
| Intrusives: | Quartz Monzonite Porphyry
locally carries cpy, mo, py. | |
| | Biotite Feldspar Porphyry | |
| | Diorite | |
| Mineralization | | |
| Bedding | | |
| Fracturing & shearing - observed | | |
| Fracturing & shearing - interpreted | | |
| Location posts | | |

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6037
MAP NO. 1

6037

FIGURE 3
To accompany report by R. Potter, P.Eng.

SUSIE GOLD MINES LTD.
JUPITER PROPERTY
(SARA CLAIMS)
AIKEN LAKE AREA, ONENICA M.D.
GEOLOGY
SCALE: 1 : 5000
MAP REFERENCE 94C/5W
PROPERTY COORDINATES 56° 30' N
126° 03' W
FIELD WORK AND DRAWING - R. POTTER, P.ENG.
MERIN MANAGEMENT LTD. JUNE 23, 76

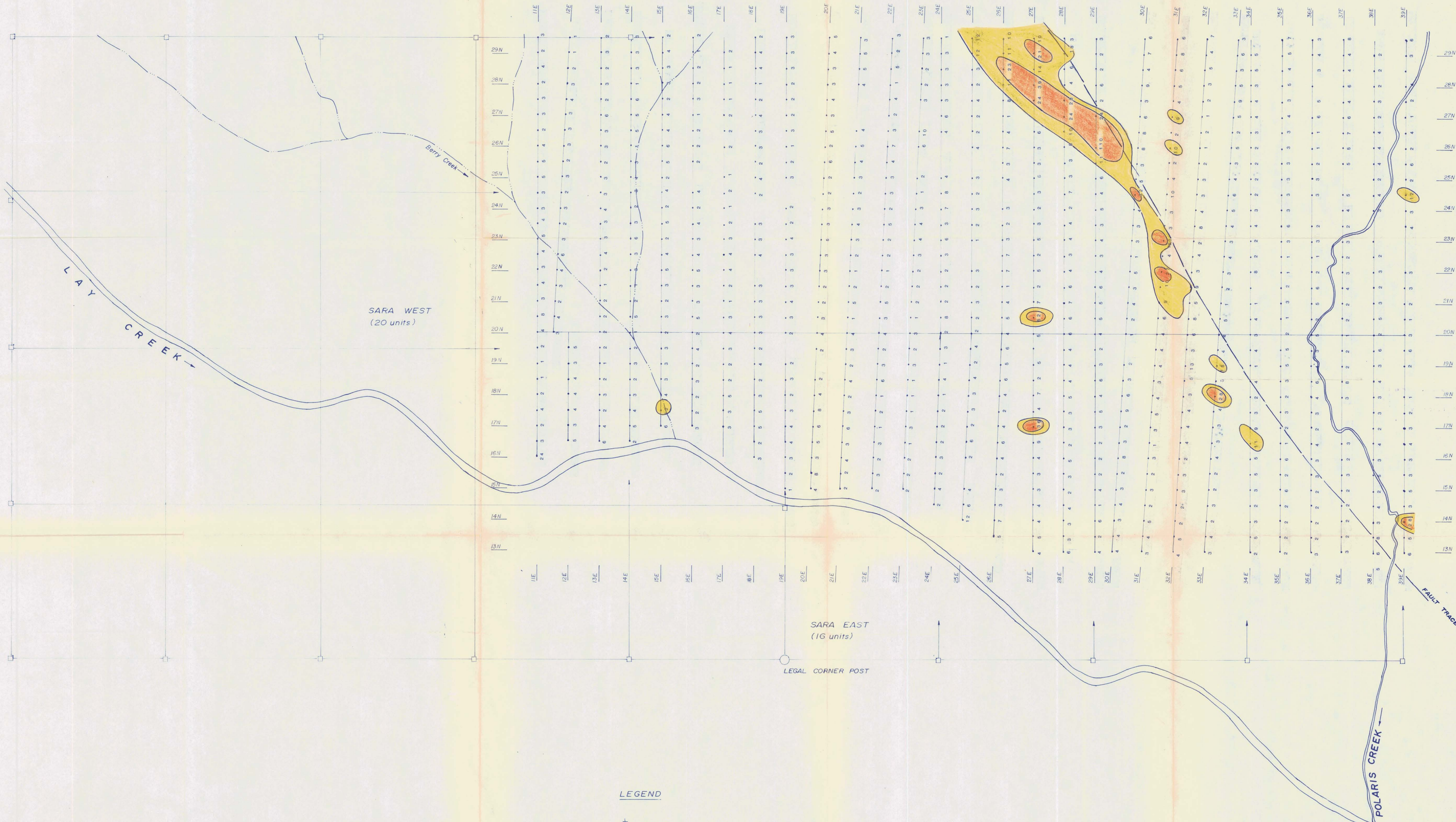


6037

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. **6037**
MAP NO. **#2**

FIGURE 8
To accompany report by R. Potter, P.Eng.

susie gold mines Ltd.
JUPITER PROPERTY
(SARA CLAIMS)
AIKEN LAKE AREA, ONEMICA M.D., B.C.
COPPER GEOCHEMISTRY
SCALE: 1:5000
VALUES IN P.P.M.
MAP REFERENCE 94C/5W
PROPERTY COORDINATES 56° 30' N
126° 03' W
MERIN MANAGEMENT LTD. AUGUST, 1976



LEGEND

- Location posts
- Geochemical survey station with value in p.p.m.
- Geochemical contour line in p.p.m.
- ANOMALOUS VALUES, ABOVE 9 P.P.M.

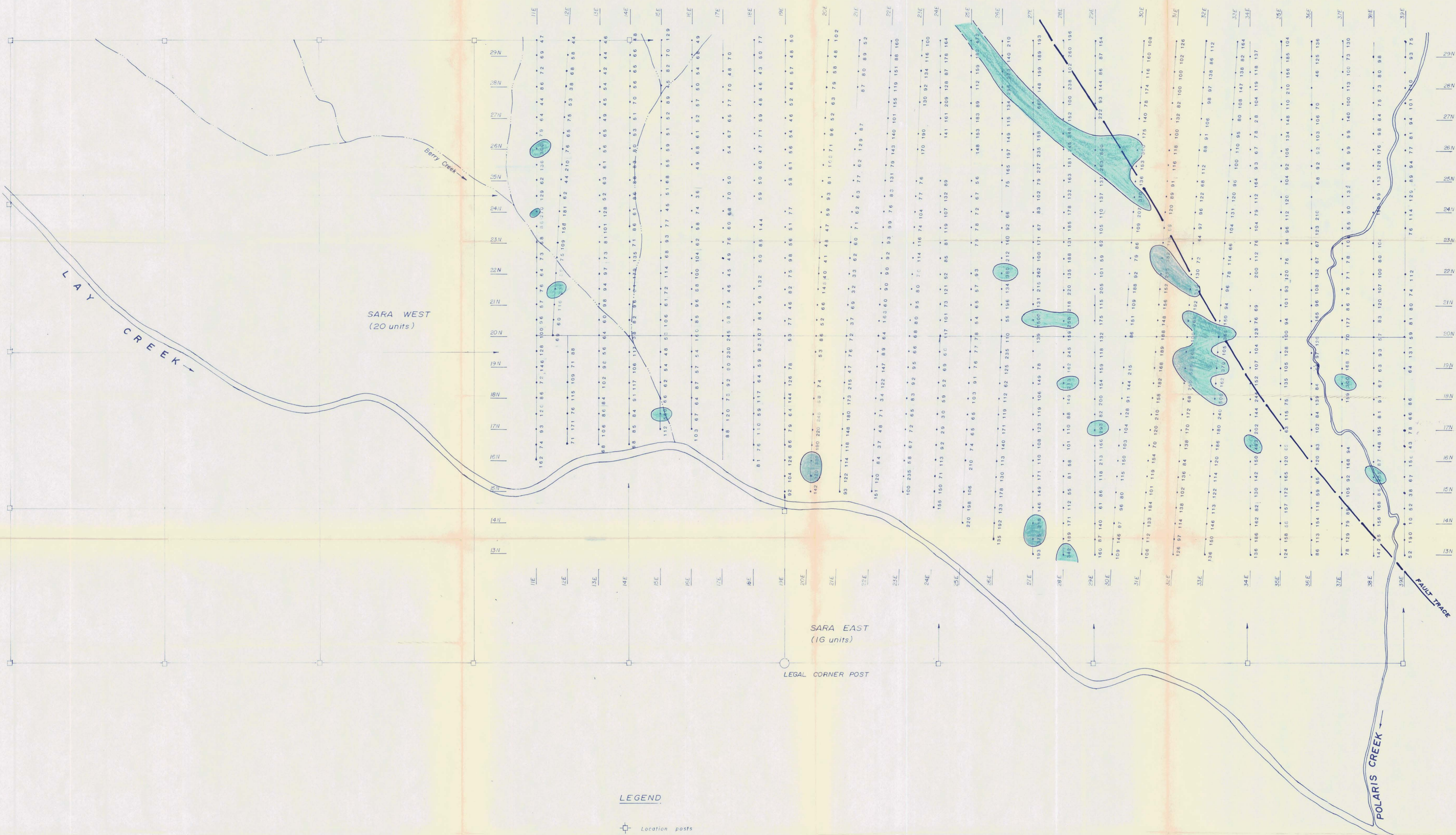


6037

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. **6037**
MAP NO. **3**

FIGURE 9
To accompany report by R. Petter, P.Eng.

susie gold mines Ltd.
JUPITER PROPERTY
(SARA CLAIMS)
AIKEN LAKE AREA, ONEMICA M.D., B.C.
MOLYBDENUM GEOCHEMISTRY
SCALE: 1:5000
VALUES IN P.P.M.
MAP REFERENCE 94C/5W
PROPERTY COORDINATES 56° 30' N
126° 03' W
MERIN MANAGEMENT LTD. AUGUST, 1976



LEGEND

- Location posts
- 220 Geochemical survey station with value in p.p.m.
- 250 Geochemical contour line in p.p.m.
THRESHOLD VALUES, ABOVE 200 PPM
ANOMALOUS VALUES, ABOVE 250 PPM

6037

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6037
MAP NO. 4

FIGURE 10
To accompany report by R. Potter, P.Eng.

SUSIE GOLD MINES LTD.

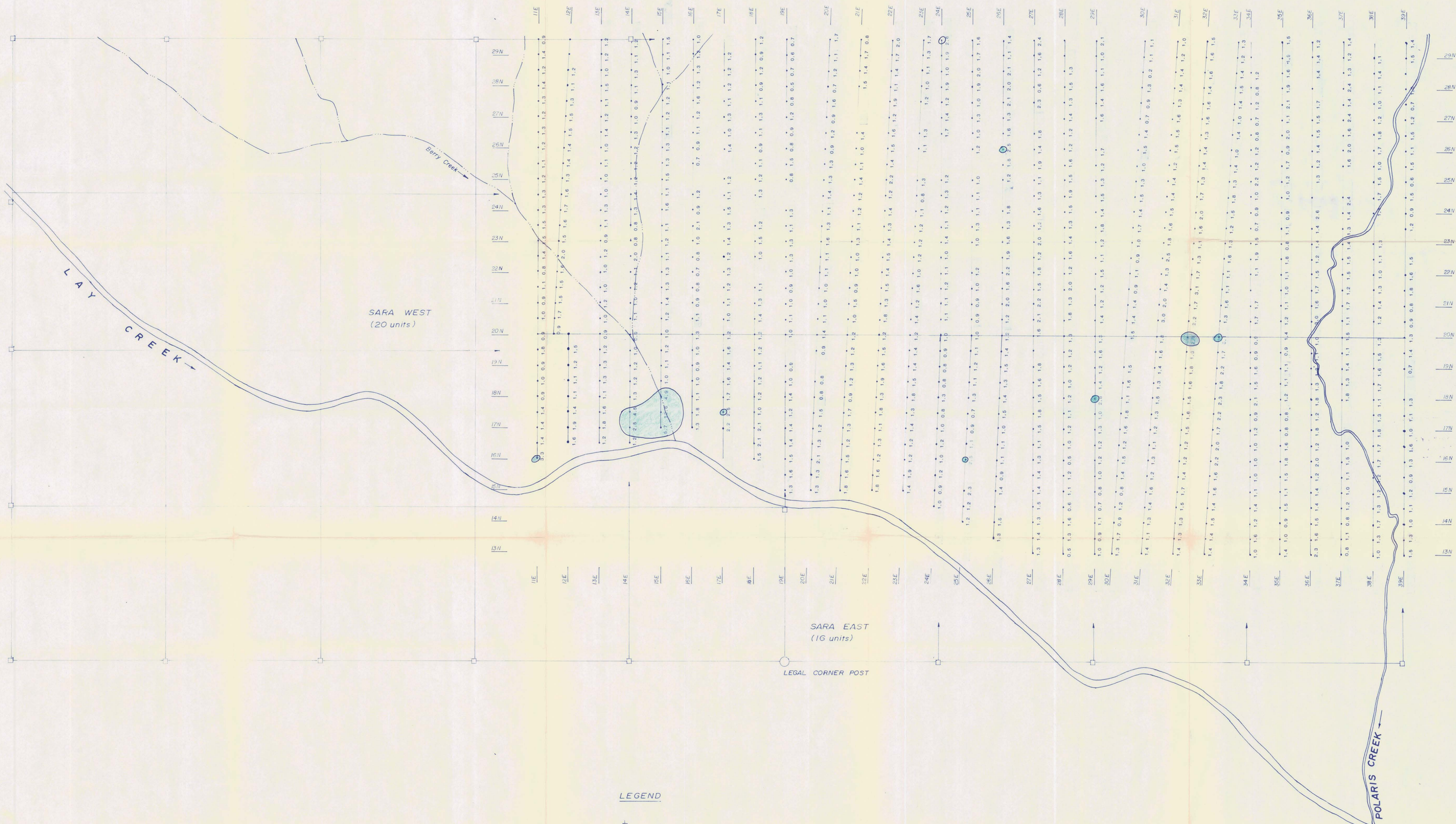
JUPITER PROPERTY
(SARA CLAIMS)
AIKEN LAKE AREA, ONENICA M.D., B.C.

ZINC GEOCHEMISTRY

SCALE: 1:5000
VALUES IN P.P.M.

MAP REFERENCE 94C/5W
PROPERTY COORDINATES 56° 30' N
126° 03' W

MERIN MANAGEMENT LTD. AUGUST, 1976



LEGEND

- Location posts
- Geochemical survey station with value in p.p.m.
- 2.0— Geochemical contour line in p.p.m.
- THRESHOLD VALUES. ABOVE 1.6 P.P.M.
- ANOMALOUS VALUES. ABOVE 2.5 P.P.M.



6037

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6037
MAP NO. #5

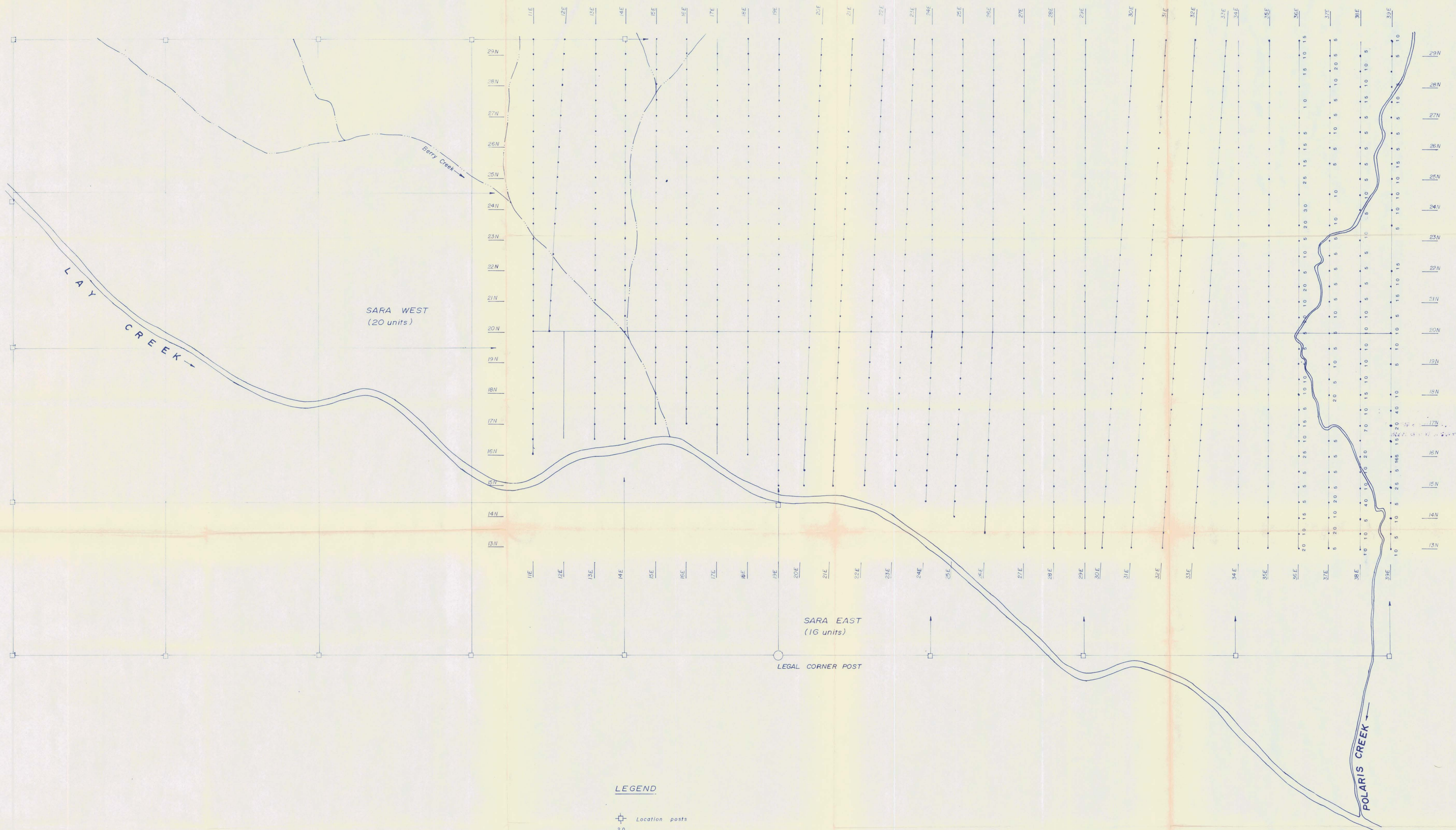
FIGURE 11
To accompany report by R. Potter, P.Eng.

susie gold mines Ltd.
JUPITER PROPERTY
(SARA CLAIMS)
AIKEN LAKE AREA, OMEICA M.D., B.C.

SILVER GEOCHEMISTRY
SCALE: 1:5000
VALUES IN P.P.M.

MAP REFERENCE 94C/5W
PROPERTY COORDINATES 56° 30' N
126° 03' W

MERIN MANAGEMENT LTD. AUGUST, 1976



6037

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. **6037**
MAP NO. **#6**

FIGURE 12
To accompany report by R. Potter, P.Eng.

susie gold mines Ltd.
JUPITER PROPERTY
(SARA CLAIMS)
AIKEN LAKE AREA, OMEICA M.D., B.C.
GOLD GEOCHEMISTRY
SCALE: 1:5000
VALUES IN P.P.M.
MAP REFERENCE 94C/5W
PROPERTY COORDINATES 56° 30' N
126° 03' W
MERIN MANAGEMENT LTD. AUGUST, 1976